

**Regulatory Impact Review and Regulatory Flexibility Act Analysis of the  
Economic Consequences of the  
DRAFT RULE  
amending the  
ATLANTIC LARGE WHALE TAKE REDUCTION PLAN  
GEAR RESTRICTIONS**

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## **1.0 REGULATORY IMPACT REVIEW**

### **1.1 Introduction**

A Regulatory Impact Review (RIR) for all regulatory actions that are of public interest is required by NMFS. The RIR does three things: 1) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem, 2) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action, and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way.

The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in Executive Order 12866 and whether the proposed regulations will have a "significant economic impact on a substantial number of small entities" in compliance with the Regulatory Flexibility Act of 1980 (RFA). The primary purpose of the RFA is to relieve small businesses, small organizations, and small governmental jurisdictions (collectively: "small entities") of burdensome regulatory and record keeping requirements. Under the RFA, an agency does not need to conduct an initial regulatory flexibility analysis (IRFA) and a final regulatory flexibility analysis (FRFA) if a certification can be made that the proposed rule, if adopted, will not have a significant economic impact on a substantial number of small entities.

### **1.2 Problems and Objectives**

Under the Atlantic Large Whale Take Reduction Plan (ALWTRP), a PBR (Potential Biological Removal) of zero has been established for the western North Atlantic population of right whales, respecting the number of incidents of human-caused serious injury or mortality per year [FR 64(3): 7530, February 16, 1999].

At its July 24, 2000, Jacksonville, Florida meeting, the Atlantic Large Whale Take Reduction Team (ALWTRT), Southeast Sub-group, set as a goal to establish a No-Take Plan (PBR=Zero) for gillnet fisheries operating in the Southeast U.S. Restricted area from November 15 through March 31 (ALWTRT, July 2000, meeting notes).

The objective of the proposed rule is, therefore, to eliminate serious injuries or mortalities of western North Atlantic right whales attributable to entanglements with fishing gear.

### **1.3 Impacts of Management Measures**

The ALWTRP's goal incorporates the time and area during which right whales bear their calves. Several possible actions to reduce the number of incidents of human-caused injuries or mortalities from entanglement in fishing gear were discussed informally. The proposed rule and alternatives are:

Alternative 1 - Proposed Action: Prohibition of the straight set of gillnets in the Southeast U.S. Restricted Area at night from November 15 through March 31, unless the exemption under § 229.32(f)(3)(iii) applies.

Alternative 2 - No-Action: No additional gear modifications in the southeast United States.

Alternative 3 - Prohibition of the straight set of gillnets in the Southeast U.S. Restricted Area at all times from November 15 through March 31, unless the exemption under § 229.32(f)(3)(iii) applies.

Alternative 4 - Prohibition of gillnets in the Southeast U.S. Restricted Area from November 15 through March 31.

### **Background**

The ALWTRP Southeast U.S. Restricted Area extends from 27° 51' N latitude (near Sebastian Inlet, Florida) northward to 32° 00' N latitude (near Savannah, Georgia) and from the shore outward to 80° W longitude. The exemption referenced above refers to shark gillnet fishing. Shark gillnet fishing has been restricted since November 1997 in this area during from November 15 through March 31, except (1) when an observer is on board the vessel, (2) the net is used as a runaround (or strike) gillnet, and (3) when certain other conditions are met. The southeastern U.S. shark gillnet fishery is considered to be a Category II fishery based on interaction levels with bottlenose dolphin. Vessel operators intending to fish in these areas for shark must notify NMFS at least 48 hours in advance of departure to arrange for observer coverage [FR 62(140):39188, July 22, 1997; FR 64(3):7556, February 16, 1999]. NMFS has received no requests for observers from vessels to fish the Southeast U.S. Restricted Area with strike gillnet gear for sharks since the regulation was implemented on November 15, 1997. Given the small number of vessels with permits to fish for sharks with strike net gear that operate in this area, this is taken as a prima facie indication that directed shark fishing has not occurred. However, gillnets are used on trips that target fish other than shark and some shark are caught incidentally on such trips.

None of the fishery-dependent data collection and management programs for marine commercial fishing activity in the southeastern coastal states (North Carolina through Texas) provide sufficient detail to definitively analyze the proposed alternatives in terms of the kind and/or set of the gillnet, hour, and area of capture (degrees and minutes for latitude and longitude). This includes information provided by fisherman, dealers, and NMFS port agents. Further, some necessary information, where collected, is not mandatory, producing either missing observations or, in some instances, data of unknown veracity. Verification would require the use of trained

observers, vessel monitoring systems (VMS), fisherman training, and/or other methods. There would be a cost associated with added detail, likely including public burden hours and budgetary cost for data collection and management by fishery agencies. However, inferences can be made about some aspects of commercial fishing based on information that is available. None of the available historical data sets provide information on the costs and returns of fishing. The three primary routine data collection systems, with note of appropriate limitations are:

General Canvass Data: Data from the NMFS, Southeast Fishery Science Center's computerized accumulated landing system (ALS) are based on the cooperative state-Federal program for fishery dependent data collection and management, and it contains monthly data on landings by species, gear, county, and dealer. The data are maintained on the NMFS, Southeast Fishery Science Center's computerized accumulated landing system (ALS). Sometimes called General Canvass data, it is based on dealer records. Dealers are the first buyers in the marketing chain going from fisherman to consumer.

Trip logbook data: Daily data are available from the NMFS trip logbook program, but the data records themselves do not incorporate the time of fishing, the kind and/or set of gillnet used, and landings of some fish. Trip logbook reporting is a condition of having the respective Federal fishing permits for commercial fishing under Federal fishery management plans (FMPs) for Gulf of Mexico reef fish, South Atlantic snapper-grouper, king and Spanish mackerel (beginning in 1998), and some shark. The data bases are separate from those for logbooks for the Atlantic Pelagic Longline Fishery which encompasses a much larger geographic portion of the Atlantic Ocean, given the nature of fish which are considered to be highly migratory species (HMS). Even so, landings of some species may be reported in both systems. The FMP-based logbook systems are not universal in that they do not provide information on all commercial and for-hire (recreational, paid-passenger carrying) fishing activity of the boats and vessels involved in the specified fisheries. Also, the NMFS Southeast Region trip logbooks have not incorporated fish price data, and the ex-vessel dollar value of logbook-reported landings were estimated using General Canvass data for this analysis.

Florida Trip Ticket (FTT) System Data: For Florida, the General Canvass data have been based on the use of data collected via the FTT system since 1987. Price and gear became mandatory reporting fields for the data records beginning in the mid-1990s, though the specific NMFS gear code is not entered on the form by the fisherman. The FTT system uses the Saltwater Products License (SPL) number as an identifier in each data record, and an SPL may be associated with a vessel (boat) or with a person. In so far as possible, NMFS port agents have added the apparent vessel (boat) identifiers to the data records for SPLs associated with persons using various other data files and sources of information. So edited, the confidential, computerized data files are accessible currently for analyst use from the NMFS, Southeast Fishery Science Center for 1997-2000.

In the South Atlantic Region as a whole (North Carolina through Miami-Dade County, Florida), commercial landings for all fish, gear, and ports averaged about 225 million pounds (\$200 million) per fishing year for the three most recent fishing years for which data are available, 1997/1998-1999/2000, as approximated by landings in the 12-month periods November-October, based on General Canvass data, which are reported monthly, not daily (Table 1). The respective averages for the South Atlantic Region as a whole for gillnet gear were about 28 million pounds (\$15 million) for the three fishing years (November-October), and about 19 million pounds (\$8.3 million dollars) for the three ALWTRP restricted fishing seasons (November-March).

Commercial landings of fish via gillnets in the ALWTRP Southeast U.S. Restricted Area and season averaged about 0.950 million pounds (\$0.515 million), using as an approximation landings in November-March in Georgia and Nassau-Brevard Counties, Florida (Table 2). This accounts

for a bit under half of the average landings via gillnets for the entire fishing year in this area, 2.3 million pounds and \$1.25 million. For all commercial fishing gear, landings averaged about 10.4 million pounds (\$17.7 million) for the 1997/1998-1999/2000 seasons, and gillnets accounted for about 9% of the pounds (3% of the ex-vessel value) (Tables 2a and 2c).

Dumont and Sundstrom (1961) provide common names, descriptions and drawings of the various kinds of gillnets and other gear that have been used in commercial fishing in the United States. While species-based definitions of mesh size, float-line length and other particulars for gillnets have been published in relation to regulations for the ALWTRP and southeast Federal FMPs, the NMFS gear codes for gillnets that are used in the General Canvass and FTT systems are not as specific. The six kinds of gillnets for which data were collected for the South Atlantic Region for calendar years 1997-2000 follow:

Gear	Code
Entangling Nets (Gill), Unspecified	400
Gillnets, Other*	425
Gillnets, Drift, Shad	465
Gillnets, Drift, Other	470
Gillnets, Drift, Runaround	475
Trammel nets	530

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\*For North Carolina only, NMFS gear code 425 has been used to indicate landings by anchor and stake gillnets.

North Carolina is the leading state in the South Atlantic region in terms of the pounds and ex-vessel value of landings for commercial fisheries as a whole, for landings based on gillnets and for landings via gillnet in the ALWTRP season (November-March) (Table 1). Landings in the state may, however, include species that are thought of as being caught mostly in the northeast as well as others that are thought of as being caught mostly in the southeast, with something of a dividing line at about Cape Hatteras in terms of ocean currents and fish stocks.

The Coastal Migratory Pelagic (CMP) FMP published in 1982 included information from economic surveys, on-going fishery-dependent data collection and other sources to indicate how gillnets, hand lines and other gear were being used in the 1970s in the southeastern United States commercial fisheries for CMP species, especially king mackerel and Spanish mackerel (GMFMC and SAFMC, 1982). The term coastal migratory pelagic fish was introduced to help distinguish these fish from tunas, swordfish, some shark and other fish that are highly migratory species (HMS) and separately managed.

The runaround gillnet became an important gear for king mackerel in the 1960s and remained so until the mid-1980s. It is no longer an authorized gear in the Atlantic Exclusive Economic Zone (EEZ) south of Cape Lookout Light, North Carolina (34°37.3' N latitude), in directed commercial fishing for king mackerel, cero, cobia and dolphin. The CMP species listed in the FMP that can continue to be harvested with runaround gillnets and other net gear are Spanish mackerel,

bluefish, and little tunny (which may include bonito).<sup>1</sup> The runaround gillnet remains as the most important gear for Spanish mackerel. Two other kinds of nets, cast nets and stab gillnets, are also authorized gear in commercial fishing for Spanish mackerel under the FMP (NMFS 2001).

Besides Federal FMP regulations, a Florida constitutional amendment precluded the use of gillnets and certain other net gear within state waters starting in July 1995. Its effect can be observed in commercial landings of Spanish mackerel for gillnets, especially for the west coast where state jurisdiction extends to nine nautical miles from shore. The effect has been less on Florida's east coast, where state jurisdiction extends to three nautical miles from shore. A few years prior to the implementation of Federal FMPs, Florida regulations on the use of gillnets and other gear were used by default to affect fishing in Federal as well as state waters, such as in fishing for king mackerel (GMFMC and SAFMC, 1982).

The leading fish caught via runaround gillnet (NMFS gear code 475) in the ALWTRP Southeast U.S. Restricted Area, as approximated by landings in Georgia and Nassau-Brevard Counties, Florida, include Spanish mackerel, sharks, pompano, blue runner, bluefish, and king whiting for the fishing year November-October. For the ALWTRP fishing season (November-March), sharks fall well below these other fish in rank.

In Georgia, landings attributable to capture by gillnet during the ALWTRP restricted seasons 1997/1998-1999/2000, approximated by landings in November-March, consisted mostly of shad and shad roe. Shad is believed to occur mostly in fresh and brackish waters, in rivers and estuaries. According to sums for the three seasons, most of the shad landings occurred in the ALWTRP restricted season, 0.239 million pounds (\$0.164 million, November-March) out of 0.241 million pounds (\$0.166 million, November-October). Georgia prohibits the use of gillnets in state marine waters. According to the data for the 1997/1998-1999/2000 seasons (except for the ALWTRP restricted period), there were some sharks caught in gillnet gear in Federal waters which were landed in Georgia. However, since May 2000 the state of Georgia no longer allows sharks caught via gillnet gear in Federal waters to be landed in Georgia. Therefore, data for the 1997/1998-1999/2000 would not be indicative of the current shark gillnet fishing effort in Federal waters off Georgia.

In Nassau-Brevard Counties, Florida, landings via runaround gillnet (NMFS gear code 475) totaled 2.6 million pounds (\$1.38 million) for the three ALWTRP seasons 1997/1998-1999/2000, and a much smaller amount occurred via drift gillnets, other (NMFS gear code 470), less than 500 pounds and less than \$500 (Table 3). The runaround gillnet sum of landings for the three 12-month fishing years came to 6.5 million pounds (\$3.6 million) (Table 4). Much of the landings for Spanish mackerel occurred in the ALWTRP season, 2.0 million pounds (\$0.84 million) out of

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<sup>1</sup>Coastal migratory pelagic fish means one or more of the following species, or a part thereof (50 CFR § 622.2, definitions and acronyms): (1) bluefish, *Pomatomus saltatrix* (Gulf of Mexico only), (2) cero, *Scomberomorus regalis*, (3) cobia, *Rachycentron canadum*, (4) dolphin, *Coryphaena hippurus*, (5) king mackerel, *Scomberomorus cavalla*, (6) little tunny, *Euthynnus alletteratus*, and (7) Spanish mackerel, *Scomberomorus maculatus*.

2.9 million pounds (\$1.365 million) (3-year sums). Relatively large proportions of the annual landings of pompano, king whiting and crevalle occur during November-March. While some shark were landed during the ALWTRP season, most of the landings for the fishing year occur in other months.

Based on the use of daily data from the Florida trip ticket system, the estimated ex-vessel value commercial landings of fish caught with gillnets in the ALWTRP s Southeast U.S. Restricted Area and season, from November 15 through March 31, totaled about \$1.0 million (for 1.8 million pounds, round weight) for the three seasons 1997/1998 - 1999/2000, or an average of about \$0.33 million per season (Table 5). This estimate is for Nassau-Brevard Counties, Florida, and it excludes any data for Georgia. Again, it is understood that the state of Georgia has allowed the use gillnets to target only shad and/or other freshwater, estuary or brackish water species since July 2, 2000.

The vessels or boats that have been used to fish commercially for Spanish mackerel tend to be small. In 1997, there were 107 boats or vessels that had home ports on Florida s east coast, that had Federal permits for commercial fishing for mackerel, and that were likely to fish for Spanish mackerel according to qualitative indicators (Vondruska, 1998).<sup>2</sup> They had a median length of 27 feet and their median engine horsepower was 228. The average gross income from fishing was \$14,000 and that for fishing expense was \$10,500 (data for one to three years prior to the year of permit). Today, there are separate Federal permits for commercial fishing for king mackerel (*Scomberomorus cavalla*, which is often lumped inseparably in landings data with cero, *Scomberomorus regalis*) and for commercial fishing for Spanish mackerel (*Scomberomorus maculatus*). Requirements to complete logbooks for trips for boats or vessels that have Federal permits for commercial fishing for mackerel were implemented in 1998.

During the three seasons 1997/1998-1999/2000, 102 unique entities landed fish caught with gillnets in Nassau-Brevard Counties. These entities are identified by the Florida Saltwater Products License number (SPL), and most of the SPLs are for vessels or boats rather than individuals. Of the 102 unique SPLs, 61 operated in 1997/1998, 62 in 1998/1999, and 41 in 1999/2000. Of these 102 unique SPLs, 16 participated or reported landings for all three seasons, 26 for two seasons, and 58 for only one season (Table 5).

Based on NMFS trip logbook-reported information for gillnet fishing activity in the ALWTRP restricted area (approximated by activity in NMFS statistical grids 2880 through 3181) and season (from November 15-March 31), the average soak time was 1.0 hour in both the 1998/1999 and 1999/2000 seasons (Table 15). It may be noted that 10% of the 421 trips in the 1998/1999 season had soak times of 4.0 hours or more and that 10% of the 296 trips in the 1999/2000 season had soak times of 7.0 hours or more. Whether the longer soak times reported by fishermen represent one set of the net or two or more sets of the net is not clear. The instructions given to fishermen for use in completing logbook forms might allow for either response, as might the availability of

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<sup>2</sup>For each of the 107 boats or vessels, Spanish mackerel was among the top four fish in value of sales and the runaround gillnet was among the top four gear, according to check off blocks on the permit applications.

fish, weather conditions, time of day, size of the boat and so on. The averages for net length were 800 yards (1998/1999 season) and 600 yards (1999/2000). The averages for other variables were as follows: crew size, two persons; days away from port, one day (the minimum for computational purposes); gillnet mesh size (diagonal opening), 3.5 inches.

Some insight about fishery behavior and/or participant compliance with FMP regulations may be drawn from logbook-reported data on gillnet length, mesh size, and soak time. The data for the 1998/1999 and 1999/2000 ALWTRP restricted area and season suggest that the trips were on average in compliance with FMP regulations for commercial fishing for Spanish mackerel on the Florida east coast, respecting Federal FMP regulations restrictions on gillnet length, mesh size and soak time (Table 15). To target Spanish mackerel on commercial fishing trips in the Mid-Atlantic EEZ and South Atlantic EEZ, the southeast FMPs require a minimum mesh size of 3.5 inches stretched, although 500 pounds of Spanish mackerel per trip is allowed for incidental catch for smaller mesh sizes [50 CFR § 622.41, (c) (3) (ii)]. However, if the mesh size is less than 4.75 inches stretch, then the incidental catch of king mackerel may exceed no more than 10 percent of the number of Spanish mackerel on board. In addition, along the Florida east coast (north of the Miami-Dade and Monroe County line), a float line no longer than 800 yards, and a soak time of no more than one hour are allowed. The ALWTRP defines a shark gillnet as one having webbing of 5 inches or greater stretched mesh [FR 64(3):7552, February 16, 1999].

## **Analysis of Alternatives**

### **Alternative 1**

Under Alternative 1, the Proposed Action, there would be a prohibition of the straight set of gillnets in the Southeast U.S. Restricted Area at night from November 15 through March 31, unless the exemption under § 229.32(f)(3)(iii) applies.

Available data indicate that there is not significant use of straight set gillnets in the ALWTRP restricted area and season. First, virtually all landings in the ALWTRP restricted area during the 1997/1998 through 1999/2000 seasons that are attributable to gillnets are for runaround gillnets according to summaries of landings by NMFS gear code (Table 3). Other than shad drift gillnets for Georgia (excluded due to either the gear designation as shad gillnets which are primarily deployed in rivers and estuaries, or by the reported composition of catch which indicates freshwater species), less than 500 pounds of reported landings in the ALWTRP (or 133 pounds per season), and less than \$500 of revenues (or \$133 per season) for the appropriate season are attributed to gillnets, drift, other gear (NMFS gear code 470). This might be attributable to straight set gillnets or could be mis-coded runaround gillnets. Whether they are in fact runaround gear, however, cannot be determined. Runaround gillnets and stab gillnets are the only kind of gillnet authorized for harvesting Spanish mackerel under southeast FMP regulations. Spanish mackerel accounted for 75% of the landings by weight and 54% of the ex-vessel value of landings for three seasons 1997/1998 - 1999/2000 taken together (FTT system data, for landings for November 15-March 31, Nassau-Brevard Counties, Florida). However, such regulations do not apply to other fish that are landed, including pompano (pounds, 6%; dollars, 29%), bluefish (pounds, 9%; dollars, 5%), various shark (pounds, 4+%; dollars, 4+%) king whiting (pounds, 2%; dollars, 4%), blue runner (pounds, 1%; dollars, 2%), and other fish (by species, 0% or 1%).

Anecdotal information suggests that fishermen that have permits for commercial fishing for Spanish mackerel proceed to the EEZ in the early morning and return by evening. Since the fishing craft that are used tend to be relatively small work boats and to have a crew of two persons, nighttime fishing is likely to be disadvantageous in terms of safety while fishing, locating and netting fish, and in return to port, should adverse weather or seas develop.

Based on NMFS trip logbook-reported information for gillnet fishing activity in the ALWTRP restricted area (approximated by activity in NMFS statistical grids 2880 through 3181) and season (from November 15-March 31), the average soak time was 1.0 hour in both the 1998/1999 and 1999/2000 seasons (Table 15). It may be noted that 10% of the 421 trips in the 1998/1999 season had soak times of 4.0 hours or more and that 10% of the 296 trips in the 1999/2000 season had soak times of 7.0 hours or more. Whether the longer soak times reported by fishermen represent one set of the net or two or more sets of the net is not clear. The instructions given to fishermen for use in completing logbook forms might allow for either response, as might the availability of fish, weather conditions, time of day, size of the boat, and so on. The average days away from port was one day (the minimum for computational purposes), and 90% of the trips were for one day (range, 1-3 days).

Using FTT system data for landings in the ALWTRP restricted area during the 1997/1998 through 1999/2000 seasons, as approximated by landings from November 15-March 31 and in Nassau-Brevard Counties, Florida, the time fished averaged eight hours for 1134 trips (range 0-55 hours; 90%, < 11 hours; 95%, < 12 hours; 99%, <15 hours). For Spanish mackerel, there were 676 trips, and time fished averaged eight hours (range, 0-22 hours; 90%, ≤ 11 hours; 95%, ≤ 12 hours; 99%, ≤ 14 hours).

Taking into account averages for soak time (1.0 hour), days away from port (1 day, the minimum possible for computational reasons), and hours fished (8 hours), suggest that trips tend to be day-trips. This appears to be in accord with Council expectations. That is, FMP regulations for Spanish mackerel define a day as starting at 6 a.m., and lasting for 24 hours. Spanish mackerel retained on board is not to be counted against the next day's trip limit, so long as the boat is not returning to port after 6 a.m. of the second day, and unloads by 6 p.m. of the second day. Again, 99% of the 1134 trips had reported fishing hours of less than 15 hours, making it likely that they could have been day-trips, albeit long day-trips. On the other hand, 1% of the 1134 trips had fishing time of 15 hours or more.

To the extent that these data are indicative of actual fishing performance, in that the significant use of straight set gillnets is not supported by available data and that reports of fishing time suggest predominantly the incidence of day-trip fishing activity, it appears that very few trips would be affected by the proposed alternative respecting fishing in the ALWTRP restricted area and season. Status quo fishing operation, should, therefore, largely continue. In the absence of significant changes in fishing behavior, significant effects on fishing communities and social relationships/structures are not expected. The implementation of additional measures to protect the endangered right whale species, however, should precipitate increased satisfaction among those groups and individuals who place value on this resource. The protective measures would engender those positive outcomes associated with public acceptance of responsible management, such as active participation in the management process, support for budget initiatives and willing



participation in data collection programs.

### Alternative 2

Alternative 2 - No-Action: No additional gear modifications in the southeast United States.

This alternative would allow status quo operation of fishing activities and would, therefore, have no effect on fishing in the ALWTRP restricted area and season. To the degree that the public deems additional protection of right whales is warranted, however, the absence of appropriate action would likely precipitate the negative behaviors associated with public dissatisfaction with management, such as refusal to participate in the management process, non-support for budget initiatives and unwillingness to participate in data collection programs.

Further, failure to act in a timely manner may both jeopardize the existence or recovery of the species, the value of which is indeterminate due to its endangered status, as well as require more severe management measures which may impose significant economic and social impacts. The extent of these additional impacts, however, cannot be assessed at this time, since they have not been specified.

### Alternative 3

Alternative 3 - Prohibition of the straight set of gillnets in the Southeast U.S. Restricted Area at all times from November 15 through March 31, unless the exemption under § 229.32(f)(3)(iii) applies.

This alternative would extend the prohibition of straight sets encompassed by the Proposed Action into the daylight hours as well. As indicated in the discussion for Alternative 1, it cannot be determined from available data specifically whether night sets or straights sets are being used. The data suggest, however, that straight sets are not used to any significant degree, regardless of the time of day fished. Therefore, an extension of the prohibition to encompass the full 24-hour day during the season in question would not likely result in significant impacts, similar to the Proposed Action.

### Alternative 4

Alternative 4 - Prohibition of gillnets in the Southeast U.S. Restricted Area from November 15 through March 31.

Under Alternative 4, in the absence of fishing effort being reallocated to alternative areas, species or gears, commercial harvests (all species) could be reduced by approximately 600,000 pounds, based on the average landings for gillnets for the three seasons 1997/1998-1999/2000 (1.8 million pounds for the 3-year period) in the ALWTRP Restricted Area and Season, as approximated by landings from November 15-March 31, Nassau-Brevard Counties, Florida (Table 5). This averages out to about \$0.3 million in lost revenues per season. This represents a significant part of what the affected SPLs had landed during the fishing year (from November 15-November 14). For the average SPL, 24% (1997/1998), 31% (1998/1999), and 17% (1999/2000) of total annual

harvest in pounds occurred during this season (50<sup>th</sup> percentile percentages, Table 6). The percentages for value were a bit lower. That is, for the average SPL, 20% (1997/1998), 28% (1998/1999), and 13% (1999/2000) of annual revenues were generated during this season (50<sup>th</sup> percentile percentages, Table 7).

Landings via gillnet gear in the ALWTRP restricted season and area accounted for a significant portion of what the same SPLs landed during the ALWTRP season, regardless of gear, area of capture, and port of landing in Florida; 1.8 million pounds out of 2.5 million pounds (\$1.0 million out of \$2.6 million) (Table 8). For the average SPL, 44% (1997/1998), 51% (1998/1999), and 37% (1999/2000) of annual harvests in pounds occurred during the season (50<sup>th</sup> percentile percentages, Table 9). The percentages for value were a bit lower. That is, for the average SPL, 43% (1997/1998), 49% (1998/1999), and 34% (1999/2000) of annual revenues were generated during the season (50<sup>th</sup> percentile percentages, Table 10).

Table 11 provides a breakout of the ex-vessel value by gear during the ALWTRP season, regardless of gear, area of capture and port of landing in Florida for the same SPLs. Clearly, the runaround gillnet is the dominant gear for these SPLs (81% of the \$2.6 million). Among the other gear types, landings by shark longline accounted for 6% of the total ex-vessel value for the three ALWTRP seasons 1997/1998-1999/2000. Table 12 is like Table 11, except that it shows harvests for the entire fishing year, and the runaround gillnet remains the dominant gear for the SPLs in the entire fishing year as well as in the ALWTRP season (79% of the \$5.6 million).

Based on Tables 11 and 12, in response to restrictions on the use of gillnet gear, it might be presumed that those SPLs that use shark bottom longlines and other longlines off the Florida east coast could expand their use of this alternate gear. However, pelagic longlining was prohibited in early 2001 for the East Florida Closed Area, an area of the EEZ that is south from 31° North Latitude (a line between Little Cumberland Island and Jekyll Island, Georgia) through Key West, as detailed with more specific descriptors in terms of latitude and longitude in Amendment 1 of the FMP for the Atlantic Pelagic Longline Fishery (NMFS 2000).

Some of the SPLs have landed fish in the snapper-grouper complex using bottom longline gear. The extent of potential expansion into this fishery is unknown. The snapper-grouper fishery is currently under a permit moratorium. Those participants/SPLs who currently own a snapper-grouper permit could expand their effort into this fishery. However, the fact that these individuals currently choose to concentrate on the gillnet fishery during this period is an indication that expected revenues would likely be lower in the snapper-grouper fishery, otherwise they would already be participating more intensely in the snapper-grouper fishery (presuming that the decision on which fishery to prosecute is an economic one). Those participants who do not currently possess a snapper-grouper permit could purchase one from an existing participant. However, of the two classes of permits, the harvest trip-limited permit cannot be transferred and the unlimited harvest permit requires a 2-for-1 buy-in (a new entrant has to purchase two existing permits). These existing permits sell for approximately \$15,000 each. Thus, a substantial financial outlay would be required to enter this fishery.

Turning to a different procedure for counting the magnitude of the gillnet fishery, there were 102 unique SPLs for the three seasons that used gillnets in the ALWTRP restricted season and area.

Among the 102 unique SPLs, 61 operated in the ALWTRP restricted season and area in 1997/1998, 62 in 1998/1999, and 41 in 1999/2000. Of the 102 unique SPLs, 16 participated for three seasons, 26 for two seasons, and 58 for one season. The three-season sum of gross revenues for these 102 SPLs totaled \$3.4 million for commercial landings of fish (all species) during the ALWTRP season, regardless of gear, area, and port of landing in Florida (Table 13). Gross revenue from the use of gillnets still dominated, 73% compared with 81% for the more restricted procedure for counting (Tables 8-12). Their landings for the three fishing years totaled \$7.4 million, with runaround gillnets accounting for 69% (Table 14). Tables 13 and 14 suggest that some of the fishermen chose to operate with different gear and/or outside of the ALWTRP restricted area during the ALWTRP season, but gillnets remained as the dominant gear.

Thus, this alternative would likely result in substantial negative economic impacts on the fishing industry with spill-over effects on other business sectors and the fishing community as a whole. The loss of up to 28% of gross revenues would likely result in some participants no longer being able to remain in the commercial fishery (Table 7). This could lead to stressed family and community structures and relationships, increased demand for local social services, additional community business failures, and relocations of families to other geographic locations to seek employment.

#### **1.4 Private and Public Costs**

The preparation, implementation, enforcement, and monitoring of this or any Federal action involves the expenditure of public and private resources which can be expressed as costs associated with the regulations. Costs associated with this specific action include:

NMFS administrative costs of document preparation, meetings, public hearings, document review, and information.....	\$ 25,000
Law enforcement costs.....	\$ none
TOTAL.....	\$ 25,000

The Federal costs are based on estimates of staff time, travel, printing and any other relevant items where funds were expended directly for this specific action.

#### **1.5 Summary of Economic Impacts**

The prohibition of the straight set of gillnets in the Southeast U.S. Restricted Area at night from November 15 through March 31 is expected to largely allow status quo operation of commercial fishing in this area. Available data predominantly indicate that straight set gillnets are a minor gear in the fisheries in operation in this area and that significant nighttime fishing activity has not been documented. Some small quantity of commercial activity may need to adapt to the regulations imposed by the Proposed Action. Available data indicate that less than 500 pounds (or 133 pounds per season), and less than \$500 of harvest revenues (\$133 per season) might be attributable to straight set gillnet gear over the most recent fishing seasons for which complete

data are available. The exact magnitude of this activity, however, cannot be determined. Some portion of this effort and harvest may need to adjust due to the Proposed Action and, as such, additional harvest costs might be incurred. However, since the alternative fishing methodology (runaround gillnet) appears to be the predominant harvest approach, it is unlikely that the impacts would be significant.

## **1.6 Determination of a Significant Regulatory Action**

Pursuant to Executive Order 12866, a regulation is considered a "significant regulatory action" if it is likely to result in: a) an annual effect on the economy of \$100 million or more; b) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; c) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets; or d) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

The measure proposed in this rule is not expected to alter current fishing practices to any major degree. Available data indicate that at most less than 500 pounds (or 133 pounds per season), and less than \$500 of revenues (\$133 per season) can possibly be attributed to the use of straight set gillnets during the appropriate season, regardless of the time of day when fishing occurred. However, none of this activity can specifically be attributed to the use of this gear. Thus, while the net effect of the lost or altered fishing opportunities ability may not necessarily be zero, it is clear that the effects would not exceed the \$100 million threshold on an annual basis.

The measures in this amendment do not interfere or create inconsistency with any action of another agency, including state fishing agencies. The proposed measures do not raise novel legal and policy issues.

The foregoing discussion establishes the basis for the conclusion that this amendment, if enacted, would not constitute a "significant regulatory action."

## **2.0 REGULATORY FLEXIBILITY ACT ANALYSIS**

### **Introduction**

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration. The RFA does not contain any decision criteria; instead, the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the FMP or amendment (including framework management measures and other regulatory actions) and to ensure that the agency considers alternatives that minimize the expected impacts while meeting

the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. This analysis is conducted to primarily determine whether the proposed action would have a "significant economic impact on a substantial number of small entities." In addition to analyses conducted for the Regulatory Impact Review (RIR), the regulatory flexibility analysis provides: (1) a description of the reasons why action by the agency is being considered; (2) a succinct statement of the objectives of, and legal basis for, the proposed rule; (3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; (4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; and, (5) an identification, to the extent practical, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule.

Description of the reasons why action by the agency is being considered: The need and purpose of the action are set forth in Section 1.2 of this document and are included herein by reference.

Statement of the objectives of, and legal basis for, the proposed rule: The specific objective of this action is to: eliminate injuries or mortalities of western North Atlantic right whales attributable to entanglements with fishing gear. The Marine Mammal Protection Act provides the legal basis for the rule.

Description and estimate of the number of small entities to which the proposed rule will apply: During the three seasons 1997/1998-1999/2000, 102 unique entities landed fish caught with gillnets in Nassau-Brevard Counties. These entities are identified by Florida SPLs, and most of the SPLs are for vessels or boats rather than individuals. Of the 102 unique SPLs, 61 operated in 1997/1998, 62 in 1998/1999, and 41 in 1999/2000. Of these 102 unique SPLs, 16 participated or reported landings for all three seasons, 26 for two seasons, and 58 for only one season. Similar enumeration for Georgia vessels is not possible. From the standpoint that the fleet in question has been characterized as primarily being a Spanish mackerel fleet, an assessment of the Spanish mackerel fleet showed that this fleet had a median vessel length of 27 feet, with a median engine horsepower of 228. The average gross income from fishing for this fleet was \$14,000 and that for fishing expense was \$10,500. Other details on the characterization of the financial operations of these vessels is currently unavailable. These vessels clearly, however, would be considered small business entities.

Description of the projected reporting, record-keeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records: The Proposed Action would not impose any additional reporting, record-keeping, or compliance requirements. Thus, no new skills would be required for compliance.

Identification of all relevant Federal rules which may duplicate, overlap or conflict with the

proposed rule: No duplicative, overlapping, or conflicting Federal rules have been identified.

Substantial Number of Small Entities Criterion:

All commercial fishing operations that prosecute fishing in the manner and location the Proposed Action would prohibit would be affected. All such operations, where they exist, are assumed to be small business entities, given the information provided above and the standard that a fish-harvesting business is considered a small business if it is independently owned and operated and not dominant in its field operation, and if it has annual receipts not in excess of \$3.5 million. Thus, a substantial number would be affected. However, the number of entities that engage in fishing in the manner that would be prohibited is considered few relative to total participation in gillnet fishing in the area and season in question, since virtually little of the gillnet harvests can even remotely be potentially attributed to the gear in question.

Significant Economic Impact Criterion:

The outcome of "significant economic impact" can be ascertained by examining two issues: disproportionality and profitability.

**Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?** All business entities participating in the fisheries are considered small business entities, so the issue of disproportionality does not arise.

**Profitability: Do the regulations significantly reduce profit for a substantial number of small entities?** The proposed regulation will largely allow status quo operation of fishing in the area and season specified. Although it is unknown the exact incidence of fishing with straight set gear and nighttime sets, available data indicate the potential for losses of up to \$133 in gross revenues per season fishery-wide, as mitigated by revenues from altered fishing practices through switch-over to standard gillnet practices (runaround sets). An average of 55 participants per year reported harvests from this area and season over 1997-2000, though only 41 participants reported in the most recent period. Potential revenue losses thus average less than \$4, regardless of whether 55 or 41 participants are assumed to fish. Thus, the regulations contained in the proposed rule do not significantly reduce profit for any of the participating small business entities.

Description of significant alternatives to the proposed rule and discussion of how the alternatives attempt to minimize economic impacts on small entities: Three alternatives to the Proposed Rule have been considered. One alternative would allow status quo operation of the fisheries and would not contribute to increased protection to the endangered species. The other two alternatives would increase the severity of the closure. The first of these alternatives would prohibit straight set gillnets around the clock during the proscribed season and, although substantial use of straight set gillnets is not apparent from available data, could potentially increase the negative economic impacts on small entities. The second of these alternatives would prohibit all gillnet activity and, thus, impose a significant negative impact on small business entities. Among those alternatives that afford increased protection to western North Atlantic right whales, the Proposed Rule, therefore, minimizes the potential negative economic impacts.

Conclusion: All business entities that prosecute the fisheries covered by the proposed rule are considered small business entities, so the issue of disproportionate effects does not apply.

Although the Proposed Action would prohibit certain fishing behavior that may exist to some degree, the incidence of this behavior is not considered prevalent nor significant. Prohibition of this type of behavior is not, therefore, expected to significantly impact the business operations or profits of a significant number of small business entities. As such, an IRFA was not prepared.

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Table 1a.--South Atlantic landings  
by fishing year and state for all gear  
for the ALWTRP fishing year as approximated by landings in November-October

Thousand pounds						Thousand dollars					
South Atlantic						South Atlantic					
NC	SC	GA	FL ec	Region total		NC	SC	GA	FL ec	Region total	
1997/1998	194,816	18,011	13,870	29,573	256,270	97,190	30,216	26,527	44,537	198,470	
1998/1999	173,540	17,445	12,102	31,724	234,811	99,366	30,489	22,540	47,183	199,578	
1999/2000	133,866	17,803	10,153	31,294	193,117	107,060	32,257	21,888	52,980	214,184	
Total	502,223	53,260	36,125	92,590	684,198	303,616	92,961	70,955	144,700	612,232	

Table 1b.--South Atlantic landings  
by fishing year and state for gillnets  
for the ALWTRP fishing year as approximated by landings in November-October

Thousand pounds						Thousand dollars					
South Atlantic						South Atlantic					
NC	SC	GA	FL ec	Region total		NC	SC	GA	FL ec	Region total	
1997/1998	27,407	402	137	3,940	31,885	13,503	240	86	2,206	16,035	
1998/1999	23,526	197	143	3,988	27,853	12,742	221	89	2,139	15,191	
1999/2000	21,621	506	58	2,538	24,723	12,172	347	34	1,480	14,031	
Total	72,553	1,105	338	10,466	84,462	38,417	808	209	5,824	45,258	

Table 1c.--South Atlantic landings  
by state and season for gillnets  
for the ALWTRP season as approximated by landings in November-March

Thousand pounds						Thousand dollars					
South Atlantic						South Atlantic					
NC	SC	GA	FL ec	Region total		NC	SC	GA	FL ec	Region total	
1997/1998	20,040	376	136	2,120	22,673	7,691	229	86	1,168	9,173	
1998/1999	16,697	172	45	2,515	19,430	7,128	201	45	1,324	8,698	
1999/2000	14,221	430	58	1,335	16,044	6,044	303	34	772	7,151	
Total	50,958	979	239	5,970	58,146	20,863	732	164	3,263	25,023	

Table 2a.--South Atlantic landings  
by fishing season and state for gillnets  
for the ALWTRP restricted area as approximated by  
landings in Georgia and Nassau-Brevard Counties, Florida and  
for the ALWTRP season as approximated by landings in November-March

	Thousand pounds			Thousand dollars		
	South Atlantic			South Atlantic		
	GA	FL ec	Region total	GA	FL ec	Region total
1997/1998	136	811	947	86	409	494
1998/1999	45	1,253	1,298	45	663	708
1999/2000	58	548	606	34	308	342
Total	239	2,612	2,851	164	1,380	1,544

Table 2b.--South Atlantic landings  
by state for gillnets  
for the ALWTRP restricted area as approximated by  
landings in Georgia and Nassau-Brevard Counties, Florida and  
for the ALWTRP fishing year as approximated by landings in November-October

	Thousand pounds			Thousand dollars		
	South Atlantic			South Atlantic		
	GA	FL ec	Region total	GA	FL ec	Region total
1997/1998	137	2,279	2,416	86	1,223	1,310
1998/1999	143	2,550	2,693	89	1,380	1,469
1999/2000	58	1,646	1,704	34	949	982
Total	338	6,475	6,813	209	3,553	3,762

Table 2c.--South Atlantic landings  
by fishing season and state for all gear  
for the ALWTRP restricted area as approximated by  
landings in Georgia and Nassau-Brevard Counties, Florida and  
for the ALWTRP season as approximated by landings in November-March

	Thousand pounds			Thousand dollars		
	South Atlantic			South Atlantic		
	GA	FL ec	Region total	GA	FL ec	Region total
1997/1998	4,111	6,468	10,579	8,043	9,872	17,915
1998/1999	3,386	7,295	10,682	5,637	10,781	16,418
1999/2000	3,291	6,790	10,080	5,684	12,950	18,634
Total	10,788	20,553	31,341	19,364	33,603	52,967

Table 3.--South Atlantic landings  
by state for the 1997/1998 - 1999/2000 seasons and gillnets  
for the ALWTRP restricted area as approximated by  
landings in Georgia and Nassau-Brevard Counties, Florida and  
for the ALWTRP season as approximated by landings in November-March

Gear	Thousand pounds**			Thousand dollars**		
	South Atlantic			South Atlantic		
	GA	FL ec	Region total	GA	FL ec	Region total
Gillnets, selected*	239	.	239	164	.	164
Gillnets, Drift, Other	.	0	0	.	0	0
Gillnets, Drift, Runaround	.	2,612	2,612	.	1,380	1,380
Total	239	2,612	2,851	164	1,380	1,544

\*Entangling gillnets, unspecified (NMFS gear code 400), other gillnets (NMFS gear code 425), shad drift gillnets (NMFS gear code 465). Landings in Georgia consist mostly of shad and shad roe, plus carp and finfish for food.

\*\*A . is used to indicate no observations in a table cell. Since the units are in thousands, a zero (0) represents a value less than 500.

Table 4.--South Atlantic landings  
by state for fishing years 1997/1998 - 1999/2000 and gillnets  
for the ALWTRP restricted area as approximated by  
landings in Georgia and Nassau-Brevard Counties, Florida and  
for the ALWTRP fishing year as approximated by landings in November-October

	Thousand pounds			Thousand dollars		
	South Atlantic			South Atlantic		
	GA	FL ec	Region total	GA	FL ec	Region total
Gillnets, selected*	241	.	241	166	.	166
Gillnets, Drift, Other	na	0	na	na	0	na
Gillnets, Drift, Runaround	.	6,474	6,474	.	3,552	3,552
Trammel Nets	na	na	na	na	na	na
Total	na	6,475	6,813	na	3,553	3,762

\*Entangling gillnets, unspecified (NMFS gear code 400), other gillnets (NMFS gear code 425), shad drift gillnets (NMFS gear code 465) combined. Landings in Georgia consist mostly of shad and shad roe, plus carp and finfish for food.

Table 5.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31, and area, as approximated via landings in Nassau-Brevard Counties, Florida.  
Along with indicators for the same SPLs by fishing year, Nov 15-Nov 14 regardless of gear, time or area of capture and port

Fishing year	SPLs	Boats or vessels	Season, pounds	Season, dollars	Season, trips	Year, pounds	Year, dollars	Year, trips
1997/1998	61	55	596,424	296,865	320	3,078,464	1,856,030	3,354
1998/1999	62	61	902,878	514,116	535	3,653,675	2,132,926	2,768
1999/2000	41	40	326,441	192,673	281	2,497,811	1,624,135	2,125
Total	164	156	1,825,743	1,003,654	1,136	9,229,950	5,613,092	8,247

Table 6.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31 and area, as approximated via landings in Nassau-Brevard Counties, Florida  
Means and percentiles (10th, 25th, 50th, 75th and 90th)

Pounds landed per SPL, ALWTRP season and area

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	9,777	267	1,450	4,356	11,117	26,135
1998/1999	62	14,563	535	1,600	7,379	20,819	44,499
1999/2000	41	7,962	513	1,846	4,948	12,481	18,517

Pounds per SPL, regardless of gear, area, time or port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	50,467	3,579	10,912	26,867	61,758	138,653
1998/1999	62	58,930	4,894	8,192	21,530	78,003	166,554
1999/2000	41	60,922	4,915	12,995	34,037	72,635	161,654

Pounds landed per SPL by gillnets in the ALWTRP season and area as a percentage of pounds landed  
for the same SPL, regardless of gear, area, time or port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	30	2	10	24	38	83
1998/1999	62	41	8	12	31	63	99
1999/2000	41	23	4	8	17	30	49

Table 7.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31 and area, as approximated via landings in Nassau-Brevard Counties, Florida  
Means and percentiles (10th, 25th, 50th, 75th and 90th)

Ex-vessel value of landings per SPL, ALWTRP season and area

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	4,867	182	726	2,058	7,015	14,940
1998/1999	62	8,292	550	1,142	4,115	12,347	20,746
1999/2000	41	4,699	479	1,109	3,123	7,634	10,732

Ex-vessel value of landings per SPL, regardless of gear, area, time or port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	30,427	1,783	8,309	18,054	41,767	74,673
1998/1999	62	34,402	2,354	6,261	15,939	42,545	89,006
1999/2000	41	39,613	4,408	14,428	24,020	53,935	83,080

Ex-vessel value of landings per SPL for gillnets in the ALWTRP season and area as a percentage of ex-vessel value for the same SPL, regardless of gear, area, time or port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	27	2	6	20	34	72
1998/1999	62	38	6	9	28	59	99
1999/2000	41	20	3	7	13	21	56

Table 8.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31, and area, as approximated via landings in Nassau-Brevard Counties, Florida.  
Along with indicators for the same SPLs by ALWTRP season, regardless of gear, area of capture and port of landing

Fishing year	SPLs	Boats or vessels	Gillnet, pounds	Gillnet, dollars	Gillnet, trips	Season, pounds	Season, dollars	Season, trips
1997/1998	61	55	596,424	296,865	320	1,399,695	794,364	1,177
1998/1999	62	61	902,878	514,116	535	1,979,350	1,119,455	1,237
1999/2000	41	40	326,441	192,673	281	1,156,456	729,754	849
Total	164	156	1,825,743	1,003,654	1,136	4,535,501	2,643,573	3,263

Table 9.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31 and area, as approximated via landings in Nassau-Brevard Counties, Florida  
Means and percentiles (10th, 25th, 50th, 75th and 90th)

Pounds landed per SPL, ALWTRP season and area

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	9,777	267	1,450	4,356	11,117	26,135
1998/1999	62	14,563	535	1,600	7,379	20,819	44,499
1999/2000	41	7,962	513	1,846	4,948	12,481	18,517

Pounds per SPL for the ALWTRP season, regardless of gear, area and port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	22,946	1,246	5,897	11,446	36,991	61,369
1998/1999	62	31,925	2,961	6,002	18,164	40,179	85,079
1999/2000	41	28,206	3,047	5,829	12,694	41,911	82,692

Pounds landed per SPL by gillnets in the ALWTRP season and area as a percentage of pounds landed  
for the same SPL in the ALWTRP season, regardless of gear, area and port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	50	6	22	44	79	100
1998/1999	62	56	12	26	51	96	100
1999/2000	41	47	11	22	37	74	100

Table 10.--Florida Trip Ticket indicators of commercial fishing activity for SPLs that used gillnets in the ALWTRP restricted season, Nov 15-Mar 31 and area, as approximated via landings in Nassau-Brevard Counties, Florida  
Means and percentiles (10th, 25th, 50th, 75th and 90th)

Ex-vessel value of landings per SPL, ALWTRP season and area

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	4,867	182	726	2,058	7,015	14,940
1998/1999	62	8,292	550	1,142	4,115	12,347	20,746
1999/2000	41	4,699	479	1,109	3,123	7,634	10,732

Ex-vessel value of landings per SPL for the ALWTRP season, regardless of gear area and port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	13,022	922	2,742	8,036	20,631	31,786
1998/1999	62	18,056	1,920	3,857	10,631	22,994	41,192
1999/2000	41	17,799	2,218	5,245	9,628	24,573	38,655

Ex-vessel value of landings per SPL for gillnets in the ALWTRP season and area as a percentage of ex-vessel value for the same SPL in the ALWTRP season, regardless of gear, area and port

Fishing year	SPLs	Mean	Percentiles				
			P10	P25	P50	P75	P90
1997/1998	61	46	6	13	43	72	100
1998/1999	62	55	7	21	49	95	100
1999/2000	41	42	11	14	34	68	99

Table 11.--Florida trip ticket-reported landings, by gear  
for the ALWTRP restricted season, Nov 15-Mar 31, as  
approximated via landings in Nassau-Brevard Counties, Florida

Ex-vessel value, thousands of dollars  
For 61, 62 and 41 that fished with gillnets in the ALWTRP  
restricted season and area in 1997/1998, 1998/1999,  
and 1999/2000 seasons, respectively

Fish	Season			Total	Percent
	1997/1998	1998/1999	1999/2000		
Haul Seines, Beach	.	0	.	0	0
Purse Seines, Other	0	.	.	0	0
Otter Trawl Bottom, Shrimp	2	2	.	4	0
Pots & Traps, Crab, Blue	6	.	.	6	0
Pots & Traps, Crab, Other	.	.	3	3	0
Gillnets, Drift, Runaround	662	952	521	2,136	81
Lines Hand, Other	15	26	16	57	2
Lines Long Set With Hooks	0	.	.	0	0
Lines Long, Reef Fish	16	26	14	55	2
Lines Long, Shark	18	58	108	183	7
Cast Nets	67	31	50	148	6
Diving Outfits, Other	.	10	12	22	1
By Hand, Other	8	3	7	18	1
Total	794	1,109	730	2,633	100

Table 12.--Florida trip ticket-reported landings, by gear  
for the ALWTRP fishing year, Nov 15-Nov 14,

Ex-vessel value, thousands of dollars  
For 61, 62 and 41 that fished with gillnets in the ALWTRP  
restricted season and area in 1997/1998, 1998/1999,  
and 1999/2000 seasons, respectively

Fish	Fishing year			Total	Percent
	1997/1998	1998/1999	1999/2000		
Not Coded	0	.	.	0	0
Haul Seines, Beach	.	0	.	0	0
Purse Seines, Other	0	.	.	0	0
Otter Trawl Bottom, Shrimp	13	5	.	18	0
Pots & Traps, Crab, Blue	42	.	.	42	1
Pots & Traps, Crab, Other	0	.	10	10	0
Gillnets, Drift, Runaround	1,513	1,769	1,154	4,437	79
Lines Hand, Other	30	66	57	154	3
Lines Long Set With Hooks	0	.	0	0	0
Lines Long, Reef Fish	69	130	116	316	6
Lines Long, Shark	31	77	166	273	5
Dip Nets, Common	.	.	6	6	0
Cast Nets	120	57	83	260	5
Spears	2	0	.	2	0
Diving Outfits, Other	5	13	15	33	1
By Hand, Other	30	4	17	50	1
Total	1,856	2,123	1,624	5,603	100



Table 13.--All Florida trip ticket-reported landings in the ALWTRP season by gear, regardless of gear, area or port of landing in Florida, for SPLs that use gillnets in the ALWTRP restricted season, Nov 15-Mar 31, and area, as approximated via landings in Nassau-Brevard Counties, Florida

Ex-vessel value, thousands of dollars  
For 102 SPLs, as they fished, of which 61, 62 and 41 chose to fish with gillnets in the ALWTRP restricted season and area in 1997/1998, 1998/1999, and 1999/2000 seasons, respectively

Fish	Season			Total	Percent
	1997/1998	1998/1999	1999/2000		
.	.	.	1	1	0
Haul Seines, Beach	.	0	6	6	0
Purse Seines, Other	30	35	.	65	2
Otter Trawl Bottom, Shrimp	9	2	1	13	0
Pots & Traps, Crab, Blue	7	31	8	46	1
Pots & Traps, Crab, Other	10	2	4	16	0
Gillnets, Drift, Runaround	859	1,020	616	2,496	73
Lines Hand, Other	23	35	30	88	3
Lines Long Set With Hooks	0	.	.	0	0
Lines Long, Reef Fish	16	26	18	59	2
Lines Long, Shark	102	117	108	327	10
Cast Nets	96	46	87	229	7
Spears	.	1	0	1	0
Diving Outfits, Other	.	10	12	22	1
By Hand, Other	16	14	10	40	1
Total	1,169	1,340	900	3,409	100

Table 14.--All Florida trip ticket-reported landings in the ALWTRP fishing year by gear, regardless of gear, area or port of landing in Florida, for SPLs that use gillnets in the ALWTRP restricted season, Nov 15-Mar 31, and area, as approximated via landings in Nassau-Brevard Counties, Florida

Ex-vessel value, thousands of dollars  
For 102 SPLs, as they fished, of which 61, 62 and 41 chose to fish with gillnets in the ALWTRP restricted season and area in 1997/1998, 1998/1999, and 1999/2000 seasons, respectively

Fish	Fishing year			Total	Percent
	1997/1998	1998/1999	1999/2000		
.	.	.	1	1	0
Not Coded	0	.	.	0	0
Haul Seines, Beach	1	0	6	7	0
Purse Seines, Other	237	140	.	378	5
Otter Trawl Bottom, Shrimp	32	5	4	42	1
Pots & Traps, Crab, Blue	44	49	30	123	2
Pots & Traps, Crab, Other	14	3	11	28	0
Gillnets, Drift, Runaround	1,916	1,940	1,288	5,145	69
Lines Hand, Other	70	86	96	252	3
Lines Long Set With Hooks	0	.	0	0	0
Lines Long, Reef Fish	69	130	121	320	4
Lines Long, Shark	156	172	177	505	7
Dip Nets, Common	.	.	6	6	0
Cast Nets	189	107	170	466	6
Spears	2	5	4	11	0
Diving Outfits, Other	5	13	15	33	0
By Hand, Other	55	33	22	109	1
Total	2,791	2,684	1,951	7,425	100

Table 15. -Indicators of gillnet fishing activity in the ALWTRP restricted area and season as approximated by activity in NMFS statistical grids 2880 through 3181 from November 15 through March 31

Variable	Percentiles					Range	Trips	Total
	P10	P25	P50	P75	P90			
Soak time (hours)								
1998/1999	0.5	1.0	1.0	2.0	4.0	0-16	421	
1999/2000	1.0	1.0	1.0	3.0	7.0	0-18	296	
Gillnet length (yards)								
1998/1999	300	600	800	800	800	3-*	421	
1999/2000	300	400	600	800	1500	35-*	296	
Crew (persons)								
1998/1999	1	1	2	3	3	1-4	421	845
1999/2000	1	2	2	3	3	1-6	296	628
Days away from port (must be >= 1 day for computational purposes)								
1998/1999	1	1	1	1	1	1-3	421	425
1999/2000	1	1	1	1	1	1-3	296	305
Gillnet mesh size (diagonal opening, inches)								
1998/1999	3.5	3.5	3.5	3.5	20.0	1.4-**	421	
1999/2000	3.0	3.5	3.5	3.5	25.0	3.0-**	296	

\*Maximum gillnet lengths appear to be erroneous. One mile = 5,280 feet = 1,760 yards. Thus, the 34,800 yards for 1998/1999 is about 20 miles; the 2800 yards for 1999/2000 is about 1.6 miles.

\*\*Maximum gillnet mesh sizes (diagonal opening, inches) appear to be erroneous; i.e., 311 inches for 1998/1999 is about 26 feet; 518 inches for 1999/2000 is about 43 feet.